

## CLAIMS

1. A cylindrical rotating thickening device including an axial core,

a shell having a longitudinal dimension and a circumferential dimension,

means supporting said shell around said axial core, and

a perforated deck surrounding and supported on said shell, said deck including a plurality of closely adjacent deck segments extending around said shell in its circumferential direction.

2. A cylindrical rotating thickening device including an axial core,

means for supporting said shell around said axial core,

a shell surrounding said support ribs and supported thereon, said shell having an outer surface including a plurality of longitudinally extending spaced apart grooves, and

a perforated deck surrounding and supported on said shell, said deck including a plurality of closely adjacent deck segments, each deck segment including a leading edge and a trailing edge,

a bar attached to said leading edge and received in said shell groove,

means for securing said leading edge to said bar, and

means for securing said bar to said shell.

3. A cylindrical rotating thickening device in accordance with Claim 2 wherein said bar is rectangular in cross section, and wherein said shell groove is rectangular in cross section.

4. A cylindrical rotating thickening device in accordance with Claim 2 wherein said trailing edge is held against said shell by a following deck segment leading edge.

5. A cylindrical rotating thickening device in accordance with Claim 4 wherein said leading edge has a lip, and said trailing edge is clamped between said leading edge lip and said shell.

6. A cylindrical rotating thickening device in accordance with Claim 2 wherein said bar is an integral part of said deck segment leading edge.

7. A cylindrical rotating thickening device in accordance with Claim 2 wherein said means for supporting said shell around said axial core is a plurality of longitudinally extending spaced apart support ribs extending radially from said axial core.

8. A cylindrical rotating thickening device including an axial core,

a plurality of longitudinally extending spaced apart support ribs extending radially from said axial core,

a shell surrounding said support ribs and supported thereon,

said shell having an outer surface including a plurality of longitudinally extending spaced apart grooves, and

a perforated deck surrounding and supported on said shell, said deck including

a plurality of closely adjacent deck segments, each deck segment including a leading edge and a trailing edge, each of said deck segment trailing edges being clamped against said shell by a following deck segment leading edge,

a bar attached to said leading edge and received in said shell groove, said bar being an integral part of said deck segment leading edge, and

means for securing said bar to said shell.

9. A cylindrical rotating thickening device in accordance with Claim 8 wherein said bar is rectangular in cross section, and wherein said shell groove is rectangular in cross section.

10. A cylindrical rotating thickening device in accordance with Claim 8 wherein said leading edge has a lip, and said trailing edge is clamped between said leading edge lip and said shell.